$f_2'(1525)$ REFERENCES

PROKOSHKIN	91	SPD 316 155		(GAM2 Collab.)
		Translated from DANS 316 900.		
ALBRECHT	90G	ZPHY C48 183	+Ehrlichmann, Harder+	(ARGUS Collab.)
PDG	90	PL B239	Hernandez, Stone, Porter+	(IFIC, BOST, CIT+)
BEHREND	89C	ZPHY C43 91	+Criegee, Dainton+	(CELLO Collab.)
ASTON	88D	NP B301 525	+Awaji, Bienz+	(SLAC, NAGO, CINC, INUS)
AUGUSTIN	88	PRL 60 2238	+Calcaterra+	(DM2 Collab.)
BERGER	88	ZPHY C37 329	+Genzel, Lackas+	(PLUTO Collab.)
FALVARD	88	PR D38 2706	+Ajaltouni+	(CLER, FRAS, LALO, PADO)
AUGUSTIN	87	ZPHY C36 369	+Cosme+	(LALO, CLER, FRAS, PADO)
BALTRUSAIT...	87	PR D35 2077	Baltrusaitis, Coffman, Dubois+	(Mark III Collab.)
AIHARA	86B	PRL 57 404	+Alston-Garnjost+	(TPC-2γ Collab.)
LONGACRE	86	PL B177 223	+Etkin+	(BNL, BRAN, CUNY, DUKE, NDAM)
ALTHOFF	83	PL 121B 216	+Brandelik, Boerner, Burkhardt+	(TASSO Collab.)
ARMSTRONG	83B	NP B224 193	+	(BARI, BIRM, CERN, MILA, CURIN+)
AGUILAR-...	81B	ZPHY C8 313	Aguilar-Benitez, Albajar+	(CERN, CDEF, MADR+)
ALHARRAN	81	NP B191 26	+Baubillier+	(BIRM, CERN, GLAS, MICH, CURIN)
CHABAUD	81	APP B12 575	+Niczyporuk, Becker+	(CERN, CRAC, MPIM)
COSTA...	80	NP B175 402	Costa De Beauregard+	(BARI, BONN, CERN+)
GORLICH	80	NP B174 16	+Niczyporuk+	(CRAC, MPIM, CERN, ZEEM)
CORDEN	79	NP B157 250	+Dowell, Garvey+	(BIRM, RHEL, TELA, LOWC) JP
MARTIN	79	NP B158 520	+Ozmutlu	(DURH)
POLYCHRO...	79	PR D19 1317	Polychronakos, Cason, Bishop+	(NDAM, ANL)
BARREIRO	77	NP B121 237	+Diaz, Gay, Hemingway+	(CERN, AMST, NIJM, OXF)
EVANGELISTA	77	NP B127 384	+	(BARI, BONN, CERN, DARE, GLAS+)
PAWLICKI	77	PR D15 3196	+Ayres, Cohen, Diebold, Kramer, Wicklund	(ANL) IJP
BRANDENB...	76C	NP B104 413	Brandenburg, Carnegie, Cashmore+	(SLAC)
BEUSCH	75B	PL 60B 101	+Birman, Websdale, Wetzel	(CERN, ETH)
AGUILAR-...	72B	PR D6 29	Aguilar-Benitez, Chung, Eisner, Samios	(BNL)
AMMAR	67	PRL 19 1071	+Davis, Hwang, Dagan, Derrick+	(NWES, ANL) JP
BARNES	67	PRL 19 964	+Dornan, Goldberg, Leitner+	(BNL, SYRA) IJPC
CRENNELL	66	PRL 16 1025	+Kalbfleisch, Lai, Scarr, Schumann+	(BNL) I

— OTHER RELATED PAPERS —

JENNI	83	PR D27 1031	+Burke, Telnov, Abrams, Blocker+	(SLAC, LBL)
ARMSTRONG	82	PL 110B 77	+Baubillier+	(BARI, BIRM, CERN, MILA, CURIN+)
ETKIN	82B	PR D25 1786	+Foley, Lai+	(BNL, CUNY, TUFTS, VAND)
LUKE	82	DESY 82/073		(DESY)
ABRAMS	67B	PRL 18 620	+Kehoe, Glasser, Sechi-Zorn, Wolsky	(UMD)
BARNES	65	PRL 15 322	+Culwick, Guidoni, Kalbfleisch, Goz+	(BNL, SYRA)

$f_0(1525)$

$I^G(J^{PC}) = 0^+(0^{++})$

OMITTED FROM SUMMARY TABLE

This entry contains evidence for $K\overline{K}$ $\pi\pi$ and $\eta\eta$ S-wave intensity peaking at the mass of the $f_2'(1525)$. Needs confirmation.

$f_0(1525)$ MASS

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
≈ 1525 OUR ESTIMATE				
• • • We do not use the following data for averages, fits, limits, etc. • • •				
1520±35	[1] ANISOVICH	94	CBAR	0.0 $\overline{p}p \to 3\pi^0, \pi^0\eta\eta$
1560±25	AMSLER	93C	CBAR	0.0 $\overline{p}p \to \pi^0\eta\eta$
∼ 1525	ASTON	88D	LASS	11 $K^- p \to K^0_S K^0_S \Lambda$
∼ 1525	BAUBILLIER	83		8 $K^- p \to K^+ K^- \Lambda$

[1] From a simultaneous analysis of the annihilations $\overline{p}p \to 3\pi^0, \pi^0\eta\eta$. Supersedes AMSLER 93C.

$f_0(1525)$ WIDTH

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
• • • We do not use the following data for averages, fits, limits, etc. • • •				
148^{+20}_{-25}	[2] ANISOVICH	94	CBAR	0.0 $\overline{p}p \to 3\pi^0, \pi^0\eta\eta$
245±50	AMSLER	93C	CBAR	0.0 $\overline{p}p \to \pi^0\eta\eta$
∼ 90	BAUBILLIER	83		8 $K^- p \to K^+ K^- \Lambda$

[2] From a simultaneous analysis of the annihilations $\overline{p}p \to 3\pi^0, \pi^0\eta\eta$. Supersedes AMSLER 93C.

$f_0(1525)$ REFERENCES

ANISOVICH	94	PL B323 233	+Armstrong+	(Crystal Barrel Collab.)
AMSLER	93C	NP A558 3C	+Augustin+	(Crystal Barrel Collab.)
ASTON	88D	NP B301 525	+Awaji, Bienz+	(SLAC, NAGO, CINC, INUS)
BAUBILLIER	83	ZPHY C17 309	+	(BIRM, CERN, GLAS, MSU, CURIN)

$f_0(1590)$

$I^G(J^{PC}) = 0^+(0^{++})$

See also the mini-review under non-$q\overline{q}$ candidates. (See the index for the page number.)

$f_0(1590)$ MASS

VALUE (MeV)		*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
1581 ±10 OUR AVERAGE						
1560 ±25			[1] AMSLER	92	CBAR	0.0 $\overline{p}p \to \eta\eta\pi^0$
1550 ±45	±30		BELADIDZE	92C	VES	36 π^- Be $\to \pi^-\eta'\eta$Be
1610 ±20			ALDE	88	GAM4	300 $\pi^- N \to \pi^- N 2\eta$
1570 ±20		600±70	ALDE	87	GAM4	100 $\pi^- p \to 4\pi^0 n$
1575.0±45.0			[2] ALDE	86D	GAM4	100 $\pi^- p \to 2\eta n$
1568.0±33.0			BINON	84C	GAM2	38 $\pi^- p \to \eta\eta' n$
1592.0±25.0			BINON	83	GAM2	38 $\pi^- p \to 2\eta n$

[1] The error is mostly systematic.
[2] From central value and spread of two solutions.

$f_0(1590)$ WIDTH

VALUE (MeV)		*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
180 ±17 OUR AVERAGE		Error includes scale factor of 1.2.				
245 ±50			[3] AMSLER	92	CBAR	0.0 $\overline{p}p \to \eta\eta\pi^0$
153 ±67	±50		BELADIDZE	92C	VES	36 π^- Be $\to \pi^-\eta'\eta$Be
170 ±40			ALDE	88	GAM4	300 $\pi^- N \to \pi^- N 2\eta$
150 ±20		600±70	ALDE	87	GAM4	100 $\pi^- p \to 4\pi^0 n$
265.0±65.0			[4] ALDE	86D	GAM4	100 $\pi^- p \to 2\eta n$
260.0±60.0			BINON	84C	GAM2	38 $\pi^- p \to \eta\eta' n$
210.0±40.0			BINON	83	GAM2	38 $\pi^- p \to 2\eta n$

[3] The error is mostly systematic.
[4] From central value and spread of two solutions.

$f_0(1590)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$\eta\eta'(958)$	dominant
Γ_2	$\eta\eta$	large
Γ_3	$4\pi^0$	large
Γ_4	$\pi^0\pi^0$	
Γ_5	$K\overline{K}$	

$f_0(1590)$ BRANCHING RATIOS

$\Gamma(\eta\eta'(958))/\Gamma(\eta\eta)$ — Γ_1/Γ_2

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
2.7±0.8	BINON	84C	GAM2	38 $\pi^- p \to \eta\eta' n$

$\Gamma(\eta\eta)/\Gamma_{total}$ — Γ_2/Γ

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
large	ALDE	88	GAM4	300 $\pi^- N \to \eta\eta\pi^- N$
large	BINON	83	GAM2	38 $\pi^- p \to 2\eta n$

$\Gamma(4\pi^0)/\Gamma(\eta\eta)$ — Γ_3/Γ_2

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
0.8 ±0.3	ALDE	87	GAM4	100 $\pi^- p \to 4\pi^0 n$

$\Gamma(\pi^0\pi^0)/\Gamma(\eta\eta)$ — Γ_4/Γ_2

VALUE	*CL%*	*DOCUMENT ID*		*TECN*	*COMMENT*
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.17	90	PROKOSHKIN	90	GAM4	300 $\pi^- p \to \pi^- 2\pi^0 p$
<0.3		[5] BINON	83	GAM2	38 $\pi^- p \to 2\eta n$

[5] Superseded by PROKOSHKIN 90.

$\Gamma(K\overline{K})/\Gamma(\eta\eta)$ — Γ_5/Γ_2

VALUE	*CL%*	*DOCUMENT ID*		*TECN*	*COMMENT*
<0.6		BINON	83	GAM2	38 $\pi^- p \to 2\eta n$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.4	90	[6] PROKOSHKIN	91	GAM4	300 $\pi^- p \to \pi^- p\eta\eta$

[6] Combining results of GAM4 with those of WA76 on $K\overline{K}$ central production.